

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Blue Ridge Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Custom Wood Products, LLC – Aerial Way Plant
3304 Aerial Way Drive
Roanoke, Virginia
Permit No. BRRO-21390

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Custom Wood Products, LLC has applied for a Title V Operating Permit for its Roanoke facility. The Department has reviewed the application and has prepared a Title V Operating Permit.

Engineer/Permit Contact: _____
Paul R. Jenkins
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Date: _____

Air Permit Manager: _____
David J. Brown

Date: _____

Regional Director: _____
Robert J. Weld, P.E.

Date: _____

FACILITY INFORMATION

Permittee

Custom Wood Products, LLC
3304 Aerial Way Drive
Roanoke, VA 24018

Facility

Custom Wood Products, LLC
3304 Aerial Way Drive
Roanoke, VA 24018

County-Plant Identification Number: 51-770-0254

SOURCE DESCRIPTION

NAICS Code: 337110 – Wood Kitchen Cabinet and Countertop Manufacturing
Custom Wood Products, LLC (CWP) owns and operates a wood cabinet manufacturing and coating facility at 3304 Aerial Way Drive in Roanoke, Virginia. CWP produces only custom cabinets that are designed to meet customer specifications.

The plant has a woodworking department that cuts and sands the wood for each cabinet. In 2013 the facility began receiving the unfinished cabinets that were crafted at a different Custom Wood Products facility. Currently only light hand sanding is conducted at the facility prior to assembly, then they are sent to the coating booths to apply tints, stains, basecoats, and/or topcoats. Coatings are applied using a combination of high volume low-pressure (HVLP) spray guns that operate at air pressures below 10 psi and air-assisted airless spray guns.

In addition to particulate matter emissions from coating operations, the Aerial Way Plant emits volatile organic compound (VOC) and Hazardous Air Pollutant (HAP) emissions, for which the plant is considered a major source.

The Maximum Achievable Control Technology (MACT) standard for wood furniture plants (40 CFR 63 Subpart JJ) applies to the finishing operations portion of the facility as an existing source before the December 7, 1995 MACT applicability date. This facility is not a PSD definition major source due to VOC PTE emissions remaining below 250 tons/yr. It is located in an area currently regarded as in attainment for all pollutants.

The facility has one minor New Source Review permit issued on August 25, 2011.

The application for renewal of this federal operating permit was received on September 14, 2012 and was deemed timely and administratively complete.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emission units at the facility are reflected in the Title V permit on Page 5 (significant units) and Condition 37 (insignificant units).

EMISSIONS INVENTORY

A copy of the 2012 annual emission update is attached. Emissions are summarized in the following table.

	2012 Criteria Pollutant Emission in Tons/Year					
	CO	VOC	SO ₂	PM-10	NO ₂	PM _{2.5}
Total	0.14	117.9	0.004	4.43	0.71	4.43

	2012 Hazardous Air Pollutant Emission in Tons/Year			
	Toluene	Xylenes	Ethyl benzene	Methanol
Total	4.05	1.65	0.41	2.26

EMISSION UNIT APPLICABLE REQUIREMENTS

The following section discusses requirements for the emissions units at the facility that are subject to Title V permitting. These requirements come from applicable federal requirements. The conditions are not repeated verbatim from the permit. The regulatory authority for each condition is listed in parentheses () below each condition in the permit.

Process Equipment Requirements - Woodworking

Unit ID # ES-DD	Door Department
Unit ID # ES-FD	Framing Department
Unit ID # ES-BD	Building Department

This group includes all of the plant's wood working processes and equipment, namely equipment in the door department, framing department and building department. All wood dust emission sources are controlled by the Aerial Way baghouse (fabric filter) exhausting to the atmosphere. The above-referenced woodworking equipment is a mix of both "existing" and "new or modified" under Virginia Regulations, that is, it is equipment constructed or installed both before and after March 17, 1972. With this being the case, CWP's woodworking equipment is subject to existing stationary source standards contained in Virginia Regulations 9 VAC 5 Chapter 40 – Article 17: Emission Standards for Woodworking Operations, as well as 9 VAC 5 Chapter 50, Article 4: Standards of Performance for Stationary Sources. There is no applicable federal New Source Performance Standard (NSPS – 40 CFR 60) at this time for this process. The Maximum Achievable Control Technology (MACT) standard for wood furniture plants (40 CFR 63 Subpart JJ) does not apply to the woodworking materials and processes that are currently used at this plant.

Limitations

- Condition 1** Particulate emissions from woodworking operations are not allowed to be discharged into the atmosphere without providing for their collection.
- Condition 2** Particulate emissions from each wood dust control device exhaust is limited to 0.05 gr/dscf.
- Condition 3** Visible emissions from wood dust emission points are limited to 20% opacity except for one six-minute period in any one hour of not more than 30% opacity.
- Condition 4** The source must develop maintenance and inspection schedules, have written operating procedures, train operators, maintain an inventory of spare parts and keep records regarding the operation of the fabric filter controlling emissions from the woodworking operations.

Monitoring

- Condition 5** CAM – The source is required to implement a Compliance Assurance Monitoring (CAM) Plan to monitor the fabric filter controlling particulate emissions from the woodworking operation. The measurement approach is to conduct daily observations of the fabric filter to determine the presence or absence of visible emissions from the exhaust or structure.
- Condition 6** CAM – The source is required to conduct monitoring and fulfill obligations specified in 40 CFR 64.7 (Commencement of operation, Proper Maintenance, Continued Operation, Response to Excursions and Exceedances and Documentation of need for improved monitoring) and 40 CFR 64.9 (Reporting and Recordkeeping).

- Condition 7** CAM – Except for monitoring malfunctions, associated repairs and required QA and QC activities the source is required to conduct all monitoring in continuous operation (or at all required intervals) at all times the fabric filter is operating. The source shall use the data collected to assess the operation of the control device and associated control system.
- Condition 8** CAM – Upon detecting an excursion or exceedance, the source shall restore operation of the fabric filter to its normal or usual manner of operation as expeditiously as practicable following the procedures outlined in this condition.
- Condition 9** CAM – This condition states that monitoring results, review of operation and maintenance procedures and records and inspection of the control device, captures system and process will be used (at a minimum) to determine if acceptable procedures were used in response to an excursion or exceedance.
- Condition 10** CAM – This condition states the procedures for addressing when the source identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data.
- Condition 11** CAM – This condition sets a limit of five excursions for any consecutive 180 days for developing, implementing and maintaining a written Quality Improvement Plan (QIP) in accordance with 40 CFR 64.8.
- Condition 12** CAM – This condition states that the requirements of the CAM plan does not excuse the source from complying with any existing requirements under federal, state, or local law or any other applicable requirement.

Recordkeeping & Reporting

- Condition 13** CAM – The source is required to maintain records of monitoring data, monitoring performance data, corrective actions taken, any written QIP and any supporting documentation.
- Condition 14** CAM – The source is required to submit CAM reports as part of the Title V semi-annual monitoring reports, the minimum requirements for these reports are outlined in this condition.
- Condition 15** The source is required to maintain records of all pressure drop readings, monitoring, maintenance and inspections.

The monitoring, recordkeeping and reporting that is included in this section is based on Virginia's Existing Stationary Sources regulations (9 VAC 5-40-2250 et seq), Periodic Monitoring regulations (9 VAC 5-80-110 E & K) and Compliance Assurance Monitoring (40 CFR Part 64). These monitoring, recordkeeping and reporting requirements are considered sufficient to ensure compliance with the limits included in this permit.

Process Equipment Requirements – Finishing

Unit ID # ES220A	Devilbiss 7' 8" x 12' Wipe/Stain Booth
Unit ID # ES225	Greenline 7' 6" x 20' Topcoat/Basecoat Booth
Unit ID # ES227	Devilbiss 7' 6" x 12' Topcoat Booth
Unit ID # ES228	Devilbiss 7' 6" x 12' Topcoat Booth
Unit ID # ES229	Devilbiss 7' 6" x 12' Topcoat Booth
Unit ID # ES230	Devilbiss 7' 6" x 12' Topcoat/Basecoat Booth
Unit ID # ES231	Devilbiss 7' 6" x 12' Topcoat/Basecoat Booth
Unit ID # ES233	Custom Built 7' 6" x 14' Topcoat/Basecoat Booth
Unit ID # ES234	Superfici Flat Line Booth
Unit ID # ES235	Production System 8' x 12' Toning/Staining Booth
Unit ID # ES236	Spray System 10' x 14' Toning/Staining Booth

Limitations

- Condition 16** Particulate emissions from the coating booths are required to be controlled by dry filters.
- Condition 17** The dry filters controlling the particulate emissions from the coating booths are required to be no less than 95 percent efficient.
- Condition 18** The source is required to implement work practice standards for the handling of volatile organic compounds.
- Condition 19** The combined emissions from the operation of the coating booths are limited on an annual basis.
- Condition 20** The visible emissions from the coating booths shall not exceed 5%.
- Condition 21** The source is required to develop a maintenance schedule and maintain records of all maintenance, have written operating procedures and to conduct training on those procedures.

Monitoring & Recordkeeping

- Condition 22** The dry filters controlling the particulate emissions from the coating booths are required to be observed at least once per week that the coating booths operate, for the functional integrity (filters in place with no visible holes, tears, gaps, etc.).
- Condition 23** Each coating booth is required to be observed for the presence of visible emissions at least once per calendar day that the booth operates.
- Condition 24** The source is required to maintain records of all emission data and operating parameters necessary to demonstrate compliance with the permit.

The monitoring and recordkeeping that is included in this section are carried forward from the underlying

minor NSR Permit (August 25, 2011) or based on Periodic Monitoring regulations (9 VAC 5-80-110 E & K). These monitoring and recordkeeping requirements in conjunction with the monitoring, recordkeeping and reporting requirements contained in the following MACT JJ section are considered sufficient to ensure compliance with the limits included in this permit.

Testing

Condition 25 The coating booths are required to be constructed so as to allow for emissions testing upon reasonable notice.

Process Equipment Requirements - MACT Subpart JJ – Wood Furniture Manufacturing Operations

Condition 26 The facility is required to be operated in compliance with the requirements of 40 CFR Part 63 Subpart JJ, including future revisions.

Limitations

The finishing area is subject to the requirements of 40 CFR Part 63, Subpart JJ – National Emission Standards for Wood Furniture Manufacturing Operations. The permit includes all requirements of Subpart JJ. Subpart JJ was revised on November 21, 2011. Revisions for wood furniture manufacturing operations include a 1 percent formaldehyde coating and contact adhesive limit and an alternative 400 pound per 12-month formaldehyde use limit as well as a prohibition on the use of conventional spray guns. The effective date for these requirements is 3 years from the effective date of the standards or November 21, 2014.

Condition 27 Emission standards for Volatile Hazardous Air Pollutants (VHAP) including a weighted average VHAP content, use of compliant finishing materials, cleaning operations strippable spray booth coating limits, compliant contact adhesives and formaldehyde limits.

Condition 28 Requirements to show continuous compliance with the VHAP emissions limits.

Testing

Condition 29 Requires that any compliance testing be conducted using the test methods and procedures in Subpart JJ.

Submittals

Condition 30 Requires that all submittals regarding Subpart JJ be sent to both the EPA and DEQ.

Monitoring and Recordkeeping

Condition 31 The source is required to meet operational and maintenance requirements including operating and maintaining the facility in a manner consistent with good air pollution

control practices for minimizing emissions and correcting malfunctions as soon as practicable.

- Condition 32** The source is required to develop and implement the work practice standards outlined in the permit including the following: Work Practice Implementation Plan, Operator Training Course, Inspection and Maintenance Plan, Cleaning and Washoff Solvent Accounting System, Chemical Composition of Cleaning and Washoff Solvents limits, Spray Booth Cleaning, Storage Requirements, Application Equipment Requirements, Line Cleaning, Gun Cleaning, Washoff Operations and Formulation Assessment Plan for Finishing Operations.
- Condition 33** The source is required to maintain records for emission limit purposes, calculations, the work practice implementation plan, compliance certifications, records associated with the compliance status reports and semiannual reports.

The monitoring and recordkeeping that is included in this section are based on the MACT JJ – Wood Furniture Manufacturing Operations requirements. These monitoring and recordkeeping requirements in conjunction with the monitoring, recordkeeping and reporting requirements contained in the preceding section (Process Equipment Requirements – Finishing) which are carried forward from the underlying minor NSR Permit (August 25, 2011) or based on Periodic Monitoring regulations (9 VAC 5-80-110 E & K), are considered sufficient to ensure compliance with the limits included in this permit.

Notification of Compliance

- Condition 34** The source is required to submit notifications of compliance that are signed by a responsible official and the notification is required to include the methods that were used to determine compliance, the results of all performance tests, the methods used for determining continuing compliance, the type and quantity of hazardous air pollutants emitted, an analysis demonstrating whether the facility is a major source or an area source and a statement by the permittee as to whether the facility has complied with Subpart JJ as expressed in the permit.

Reporting

- Condition 35** The source is required to submit reports demonstrating continuous compliance and any exceedance of a baseline level.

STREAMLINED REQUIREMENTS

Condition 5 (Control Device Observation) of the August 25, 2011 minor NSR Permit has been streamlined because the requirements of the Title V condition (T5-22) are more stringent than the requirements in that August 25, 2011 Permit condition.

Condition 6 (Requirements by Reference) of the August 25, 2011 minor NSR Permit has been streamlined out of the permit because the applicable parts of 40 CFR 60, Subpart JJ have been included in the Title V Permit.

Conditions 11 (T5-75), 12 (T5-64), 15 (T5-52) and 17 (T5-69) of the August 25, 2011 minor NSR permit have been streamlined. The requirements contained in these four conditions are included in the General Conditions section of the Title V permit.

The corresponding Title V permit condition is included in parentheses above and the Title V permit conditions include the corresponding minor NSR permit condition in the citation.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

40-45 Permit Expiration

These conditions refer to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia*, and the “Department of Environmental Quality Agency Policy Statement No. 2-09”.

52 Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

71-74 Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition 52 and General Conditions 71-74. For further explanation see the comments on General Condition 52 above.

79 Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

STATE ONLY APPLICABLE REQUIREMENTS

None

FUTURE APPLICABLE REQUIREMENTS

None

INAPPLICABLE REQUIREMENTS

None identified in the application. The facility is subject to 40 CFR 98.346 and is required to maintain GHG monitoring records and calculations. However, the requirements contained in the GHG Reporting Rule in 40 CFR 98 are currently not included in the definition of applicable requirements in 40 CFR 70.2 and 71.2 and are therefore not included in the Title V permit. There are no applicable GHG permitting requirements.

COMPLIANCE PLAN

None

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9VAC5-80-110.

Insignificant emission units are shown in the table contained in Condition 37 of the permit.

CONFIDENTIAL INFORMATION

No confidential information request has been made. All portions of the Title V permit and application are available for public review.

PUBLIC PARTICIPATION

The draft permit will be published in the *Roanoke Times* on October 23, 2013. The public comment period ran from October 23, 2013 to November 22, 2013. No comments were received. The EPA review period ended on December 9, 2013. No comments were received.

Attachment: 2012 Annual Emissions Update